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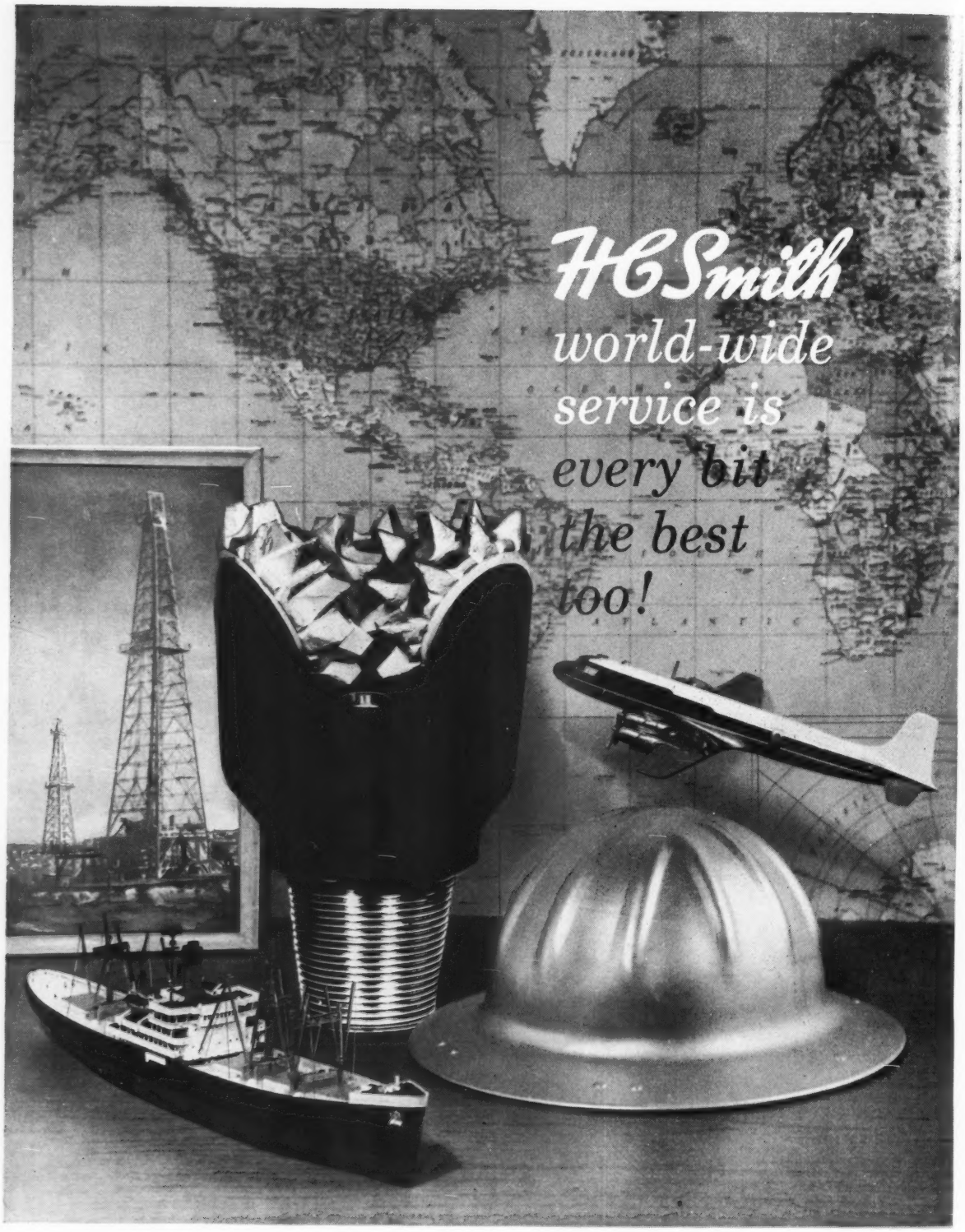

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PUBLISHED TWICE A MONTH
By
PETROLEUM PUBLISHERS, INC.

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KINZIE MILLER—President • LELA MONROE—Vice President
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2404 WEST 7th STREET, LOS ANGELES 57, CALIFORNIA • DUnkirk 2-8218
CHICAGO—FRED JONES & SON—Room 517, 205 W. Wacker Drive, Chicago 6
CLEVELAND—HOWARD F. McCLENAHAN—1900 Euclid Avenue, Cleveland 15
NEW YORK—THE McKEOWN COMPANY—342 Madison Avenue, New York 17

• SECOND ISSUE
FEBRUARY, 1959
VOL. 52 • NO. 4
WHOLE NO. 2010
February 28th, 1959

California Oil World is published twice a month at 2404 West 7th St., Los Angeles 57, California. Second-Class Postage Paid at Los Angeles, California. Subscription price $1 per year in U. S. and possessions, $2 in foreign countries including Canada.

The Time For Action Is Now

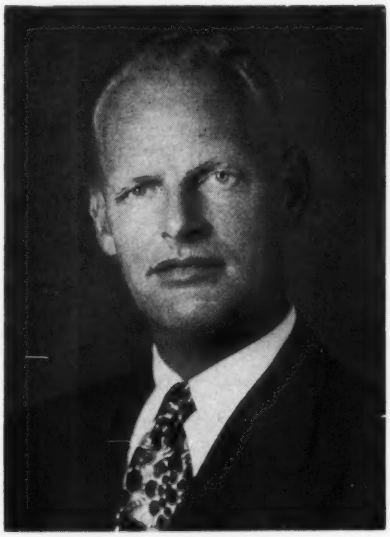
"American businessmen are fast learning that they have been losing public support. While they have been building industrial might, which has added so much to our national wealth and well-being, they have relinquished leadership in our national affairs. They have been too busy to contemplate and adjust to the changes taking place in our social and economic environment.

"Through preoccupation with the job itself they have neglected the task of defending business against its opponents. Businessmen are now finding themselves maligned and their motives questioned. We must study and again understand the interdependence of business, political matters and the welfare and dignity of our people.

"It often seems unnatural for engineers to deviate from their professional calling. In our studious, deductive approach to a job we easily can be introverted and oblivious of outside activities. Today, each one of us should keep informed. We should know what our government is doing at all levels and we should be ready to take a stand on important issues.

"Here in California, within the last six months, I have seen companies unwilling to openly state their position on important public issues for fear of losing customers or would-be friends. We must do our own constructive thinking about the kind of society and the kind of government we want in this country, and then we must be heard from.

"We find ourselves interminably vulnerable. The problems of today are not only new, they are greater. America, with its increasing population, is experiencing a vast growth in industrial production. We no longer are self sufficient in the many raw materials and important minerals we use. But from a world-wide point of view, mineral resources are abundant. What more compelling reason could there be for us to recognize and acknowledge that there no longer is any line between one continent and another?



Howard C. Pyle

Editor's Note:—In his inaugural address as 1959 president of the American Institute of Mining, Metallurgical and Petroleum Engineers at the annual meeting of the Institute in San Francisco on February 18th, Howard C. Pyle, president of Monterey Oil Company, pointed out that the politicians and labor leaders are rapidly taking over national leadership from those who produce because of the American business men's preoccupation with the task of building industrial supremacy to the neglect of his forceful participation in national affairs.

Whether the oil industry is more or less insensible to existing conditions than other industries, we do not know. But since this is an oil industry address we quote from it as a reminder that dynamic action in national affairs by the oil industry could spark plug a concerted movement; and concerted action is what we need.

"As engineers our horizons are broadened. It is not enough that we find, produce and process minerals. We must as individuals and as corporate groups participate in this growing and changing world. We no longer think of oil from the Middle East and Venezuela, iron ore from Peru or the Orinoco, copper and gold from South Africa, as simply grist for our mills.

"Foreign mineral production must play a part in the growth pattern of the producing countries themselves and we should help, not hinder, this growth. It is becoming more evident every day that no public nor private purpose can be sensibly planned with disregard for either domestic or foreign considerations.

"America has become great because of one basic philosophic idea, the idea that we can improve the lot of our people without interfering with their civil liberties. Needless to say, there are opposing ideas in the world today. Our engineers, at home and abroad, have more to do now than just their technical work. As professional men at home they share in the responsibility of preserving our heritage. When abroad the American engineer has even greater responsibilities. There, he is not only a professional man but a representative of a great and prosperous country and a way of life."

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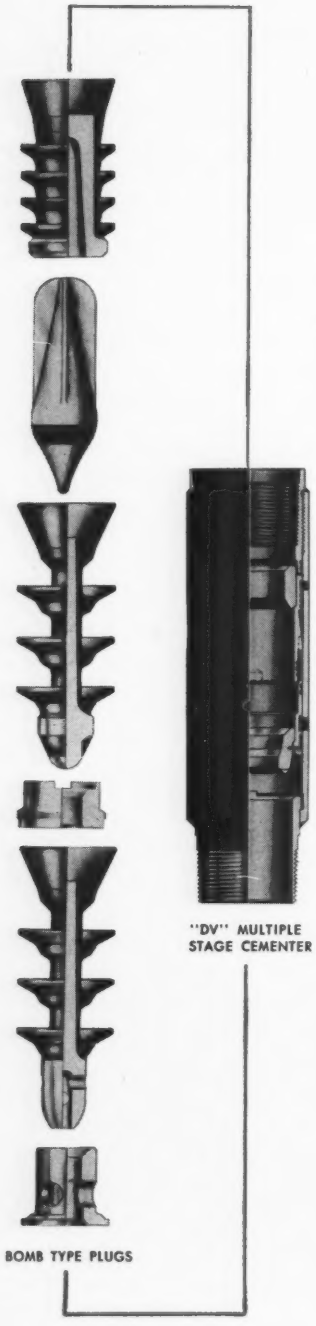

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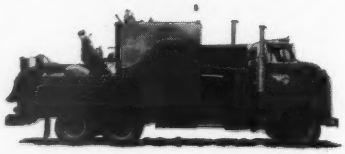

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284 SERVICE CENTERS—JUST MINUTES AWAY FROM YOUR WELL

Tom Ashe of Globe Oil Tools Co., incoming president of the Los Angeles Chapter of Nomads, receiving the Chapter Gavel from retiring president, Earl Daniels of Hydril Company, at the Los Angeles Chapter of Nomads Inaugural Ball, February 14, 1959.

L.A. Basin A.P.I. Chapter Meeting

The meeting of the Los Angeles Basin Chapter of the American Petroleum Institute was held at the Shell Recreation Hall in Long Beach on January 20, 1959. The guest speaker for this meeting was Mr. Dave Goodwill, District Superintendent of Standard Oil Company of California in Santa Barbara, who spoke on the subject of the "Design and Installation of Summerland Offshore Platform."

Following a question and answer period a film showing the building and installation of the Summerland platform was presented.

Coalinga-Kettleman A.P.I. Chapter Meeting

The Coalinga-Kettleman Chapter, A.P.I. met at the Polvadero Country Club on January 21st, L. E. Matthews presiding.

Tom Petrulas, Program Chairman, introduced Carroll Wilson, Halliburton Oil Well Cementing Co., as the guest speaker who spoke on the subject "Practical Application of Formation Testing." His talk was followed by a film entitled "Testing Science." He then read a brief paper dealing with the history of Drill Stem Testing as compiled by the Los Angeles Co. Library and showed slides from Halliburton files of drill stem tests.

Chairman Matthews reminded the API members present of the Coalinga College course which started February 2, 1959 to be conducted by Ed Lester. Subject: "Absorption Plant Operation."

Desk and Derrick Club Meetings

San Francisco

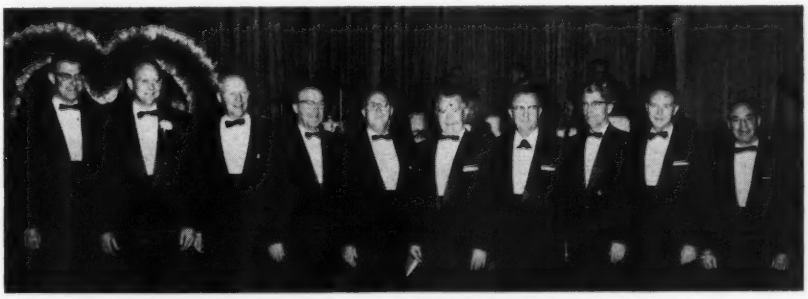
H. M. Van Clief of the Honolulu Oil Corporation, the featured speaker at the dinner meeting of the San Francisco Desk and Derrick Club, February 12, in the Marine's Memorial Club, spoke on "Oil Prospecting in Alaska."

Mr. Van Clief, a second generation native son from Santa Barbara County, attended Stanford University where he received an AB degree in Geology and Mining. He is a charter member in the first API Chapter formed in California and maintains an active interest in American Petroleum Institute affairs. He has served the Honolulu Oil Corporation in many capacities over the past 37 years and is presently manager of field operations, Western Division.

Los Angeles

The antitrust suit against seven major west coast oil companies was discussed by Paul E. Bermingham, director and general counsel, General Petroleum Corporation for the enlightenment of the members of the Desk and Derrick Club of Los Angeles at their regular dinner meeting, February 17th at the Biltmore Hotel.

Mr. Bermingham covered the background and current status of the government's attack against the oil companies with an explanation of the issues involved and a discussion of the relief demanded. He has been a director and general counsel of G.P. since 1956, having joined the company in July 1953 as associate general counsel. For ten years prior to that he was a member of the law department of Socony-Vacuum Oil Company (now Socony Mobil Oil Company, Inc.). A native of New York, he was graduated from Colgate University in 1931 and received his LLB from the Columbia University Law School in 1934.



NEW OFFICERS OF LOS ANGELES CHAPTER OF NOMADS

At the Twentieth Annual Inaugural Ball of the Los Angeles Chapter of Nomads held at the Biltmore Bowl, February 14, 1959 the following officers were inaugurated. Left to right: Bob Gaylord of Wagner-Morehouse, Inc., Senior Regent; Art Marshall of H. C. Smith Oil Tool Co., Deputy Sergeant-at-Arms; Andy Anderson of Pacific Perforating Co., Sergeant-at-Arms; Earl Daniels of Hydril Company, Junior Regent; Harry Hester of McCullough Tool Co., Master of Ceremonies; Tom Ashe of Globe Oil Tools Co., President; Taylor Bannerman of Technical Oil Tool Corp., Vice President; Knight Templeton of Bowen ITCO, Treasurer; Charlie King of Baker Oil Tools, Inc., Assistant Secretary; P. M. Bowen of Martin-Decker Corp., Assistant Treasurer. Not shown, Leo Cypher of Baash-Ross Tool Co., Secretary, who is in Europe.

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Petroleum LORE and LINGO

By RICHARD SNEDDON

Spudding In

Basically, the rotary drilling system proceeds about as follows: For the initial bore, or spudding, a wide bit, usually about 30 inches in diameter is screwed to the end of a joint of drill pipe. A short section of hole is drilled, the bit is withdrawn, and the bore is lined with surface or conductor casing. This is then cemented to the well face all the way to the surface by simply using a wooden plug with water pressure behind it as a piston to drive the carefully calculated cement charge down to the bottom of the hole and up behind the casing. It is called "conductor" casing because it becomes a guide for tools and equipment in all subsequent under the surface operations; and takes its name from the Latin **cum,** "with" (which is often converted to "con" in English, as, for example, in convert—a combination of the same **con,** and vertere, "to turn"), and **ducere,** "to lead."

Pounders & Binders

By the way, speaking of another word used in the preceding paragraph, next time your foreman gets after you for allowing that engine to run too noisily, you might explain, from a safe distance, of course, that "piston" is derived from the Latin **pistum** which signifies "something that pounds." "Cement" used to be the small rocks and gravel that were used as ingredients of mortar or binding material, now it is the binding material. Mortar was originally the vessel in which the compounding was done, now it is the stuff that was compounded. "Diameter" is from the Greek **dia,** "across" and **metron,** "measure." The interesting derivation of "pipe" has already been defined, and "casing" is merely something that encases—(In this instance it encases the well.) It has been used in its present form since medieval times.

The Casing Strings

To get on with the drilling business, it should be noted that other strings of casing are set at appropriate intervals as the well is deepened, each running all the way to the surface inside the surface casing and each being cemented in the same manner as the first. This means the working diameter of the hole becomes increasingly smaller and in consequence it is necessary to use smaller and smaller bits. As the well deepens, new joints of pipe are inserted below the kelly to extend the string. After each cementing the wooden plug and any cement that remains in the hole are chewed up when a new bit is introduced and drilling is started again.

Formation Testing

This sequence of events is continued until the top of the oil sand is reached. If he is not already thoroughly sure of what lies underneath, the operator may test the producing formation by pulling out the drilling string and attaching a drill-stem tester in place of the bit. The tester is a device that excludes the mud and cuttings in the hole and, indeed, is packed off so that nothing can enter it but gas, oil, or water from the formation. Thus a sample of the actual effluent (Latin **e,** "from," fluere, "to flow") is obtained, and using the height to which the fluid rises in the drill stem as an indication, an estimate is made of the quantity of oil to be expected. If the well is a good one, extra blowout prevention equipment may be added to make sure that it remains a good one. The blowout preventer is simply a system of high pressure valves that can be used to close in the well and control its flow of gas and oil. Production tubing is then run into the oil section, the necessary valve assembly to divert the fluid into the lease tanks is attached at the top end, and we have a well.

The Finishing Touch

The section of tubing that enters the producing formation usually consists of perforated pipe, known as a "liner," or is a gravel-packed filter encased in a double walled pipe. Both of these are designed to keep sand from entering the oil bore without restricting the flow of oil. It might be noted, too, that during the course of drilling or at intervals as required, the character of the successive underground formations encountered is recorded by coring or by one or more types of logging instruments, or by both. These logging devices vary in form, and measure such things as electrical resistivity, reaction to gamma ray exposure, sound velocities through a standard section of the side wall, changes in the gauge of the hole bore (calipering), and other data that are of value to the petroleum engineer and the geologist.

The Logging Art

"Logging" is the kind of term that the etymologists love to play with. A log was once just an ordinary hunk of wood, but when the sailors took a small one, tied it to the end of a reeled line, and tossed it into the water to determine a ship's speed, it became a measuring instrument. The length of line unreeled, with certain allowances for drag, in a given time was the distance the ships had traveled in that time. Now they have much more accurate instruments for that purpose, but in any case, from then on the record of any series of measurements or properties became a log, and the process of acquiring them became logging.

Interpretation

Through experience and study of the curves that are developed by these logging methods; through comparison with seismograms, and other recorded subsurface information; and through correlation with actual cores, engineers have learned

to interpret the electric, gamma ray, and sonic logs in terms that are significant to the entire oil exploration and exploitation picture. The curves are, of course, always recorded in relation to depth so that any interesting section can be logged by several of the approved methods and deductions can often thus be confirmed or refuted by additional evidence. "Caliper" is the same word as "caliber" so a caliper log of a well bore is a continuous record of the gauge or inside dimensions of the hole, just as one might log the caliber of a rifle bore from muzzle to butt.

What They Tell

Specifically the logs can be used to distinguish between the hard, more solid rocks and the permeable or porous varieties. They aid in the definition of boundaries between rock beds, and are, therefore, most useful in the delineation of such structural characteristics as are exposed by the well face. At least qualitatively they distinguish between beds carrying hydrocarbon compounds and those bearing water, and can almost point the exact depth at which separate oil and water beds meet. They are employed not only to indicate what sections should be tested for production, but in proven areas are of distinct value in the estimation of oil reserves.

Electricity & Radiation

Mostly everyone knows that all substances are either resistors of electricity or conductors of it, and that the unit of resistance is an "ohm" while the unit of conductance which is the reciprocal of resistance is an "mho." This was discussed in a prior chapter. Meanwhile, it might just be remarked that it is the continuous measures of these and related factors that are contrived by the electric logging devices. Gamma rays were discovered by Sir Ernest Rutherford, a noted English physicist. He found that radium emanations were composed of three kinds of rays which he named **alpha, beta** and **gamma,** the abc of the Greek alphabet. The gamma rays were of the same species as x-rays but were much shorter and hence had much more penetrating power. It is the play of these on the subsurface formations that provides the gamma ray log. These rays are so penetrative that the log can be made through the casing.

Sonic Logs

The word "sonic" is from the Latin **sonus,** meaning "sound" and the sonic log is a recording of the time required for a sound wave to travel through a definite length of formation. The sound waves are emitted by a sort of noise generator which is part of the recording instrument. This instrument is known as a "sonde" which is probably from the French **sonder,** "to probe." The rate of sound travel across an interval is influenced by the density of the material, by whether the material is wet, dry, or oily, consolidated or non consolidated, or has other pertinent physical characteristics. The sonic log is helpful, thus, in defining the kinds of rocks that are encountered in the well, their porosity or lack of it, and their saturation with either oil, gas, or water. There are many other types of logs but these sketchy descriptions are perhaps enough to show in a general way how they are used and what is their function.

The Wandering Bit

Early experience with the rotary drilling system indicated that the bit had a tendency to follow the path

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of least resistance and sometimes to meander far from the perpendicular. (Latin **perpendiculum,** "a plumb line," originally from **per,** "perfectly" and **pendere,** "to hand.") This was discovered when engineers began surveying the well bores to determine what, if any, deviation was actually taking place. Some of the first attempts in this direction were made by lowering a bottle of molten wax in a hot, jacketed container, to the requisite level, and leaving it there long enough for the wax to cool and set. The tilt of the solid material in the bottle was a measure of the slant of the well bore at the point of test. The jacketed container was long enough and wide enough to conform to the trend of the hole and was sufficiently narrow internally to hold the bottle to the same angular relationship.

Early Hole Surveys

The foregoing method proved unsatisfactory for a number of reasons, one being the time lag in the solidifying of the wax which made it rather difficult to tell when and where in the hole the solidification had taken place. Resort was next made to the "acid bottle" test. This was pretty much a modification of the wax bottle in which the wax was replaced by hydrofluoric acid. This latter is a highly corrosive agent that even attacks glass and, indeed, was at one time—perhaps still is—used in making frosted light bulbs. It is derived from fluorite a substance that is used as a flux, that is, to aid the fusion of metals. The name is from Latin **fluere,** "to flow." A bottle containing a quantity of the acid was let down quickly as before to the desired depth, where it was allowed to remain long enough for the glass to become noticeably etched on the inside.

Eating & Etching

Etch is from a former German word **etzen,** "to eat." The oval or ring at the upper surface of the etched section in this case marked the degree of deviation. This method, too, was unreliable because the slightest movement of the bottle would splash the acid upwards, leaving a film that etched impertinent areas, rendering the final definition obscure. Although both these methods were themselves inadequate they did disclose the existence of a situation that was decidedly alarming, and they did excite a rewarding search for more effective instruments and methods to determine just how bad the situation was. There was no question that some holes had wandered widely. Oval is egg-shaped from Latin **ovum,** "an egg."

Drilling for Beer

There was evidence that straight holes were rare and it was even suspected that many might have strayed so far as to be bottomed in adjoining properties. So obvious was the lack of directional control, indeed, that new holes were drilled into already producing wells and in one case that is of record, a Pennsylvania operator drilled from the summit of a hill into a brewery vat that was located in the base. The crew was much surprised to bail up a nice, sparkling, amber-colored fluid that smelled strongly of hops. Being oil men, they didn't need a chemist to tell them it was beer. One little taste did it—after which the oil men also smelled strongly of hops.

The Single Shot

It will be patent to anyone with an elementary knowledge of geometry that by either of the bottle methods, even had they been accurate, it was impossible to get the complete story. They could only determine roughly the degree of angularity of the bore hole at any given point but were quite unable to determine the direction of the angularity. This shortcoming was presently amended, however, by the development of what was called "the single shot" survey—still very much used, incidentally. It was so named because it yields a single test only on each trip as distinct from a continuously recording series.

How it Works

The single shot employed an ingenious combination of camera, compass, plumb-bob, and circular chart —the last divided into 360 degrees. All of this paraphernalia is contained in a cylinder which is lowered into the well. Paraphernalia just means stuff and things. It is descended from the Greek **parapherna,** "the dowery of a bride" which could be almost anything from a fan to a fortune. When the required depth is reached, an electrically operated trigger causes the plumb-bob to drop far enough to make an indentation on the chart face. At the same instant the camera shutter is clicked and a flashlight photo is taken of the chart and the compass. The angle of deviation is revealed by the position of the small indentation on the chart, and the direction of inclination is disclosed by the compass reading. A plumb-bob is a lump of lead at the end of a string, from Latin **plumbum,** "lead." These single-shots enabled the operator to check the course of the drill at reasonable intervals and take immediate measures to straighten the hole when it began to veer away from the perpendicular.

The Principal Factors

This evolution of drilling technique took place over a number of years and while engineers were cerebrating terrifically in an effort to find a way of drilling straight holes, they were simultaneously exercising themselves no end to find what was causing the bit to deviate from the straight and narrow path. In due course they had their answers: The main controlling factors turned out to be (1), weight on the bit and the manner of its imposition; (2), speed of rotation; and (3), character of the formation being penetrated. There were other affecting influences and agents but these as noted were the principal ones. It seems that for every particular type of sub-surface stratum there is an optimum combination of weight and speed, and when this ideal is reached it is maintained until the behavior of the drilling string indicates the need for a change.

Instrumentation

This doesn't mean, of course, that the driller has to make drastic mechanical adjustments for every variation in the hardness of the subsurface layers. In reality the shift from one formation to another is normally very gradual and no sudden changes of technique or equipment are required. Also, it is to be remembered that whereas in earlier times, the driller had to rely on the action of the tools to sense what was going on down below, today he is aided greatly in his decisions by weight indicators, revolution counters, mud pressure gauges, a raft of bottom hole tests, and the advice of petroleum engineers and mud technologists.

Weight on Bit

An important discovery in the course of early rotary drilling research was the fact that when the string was weighted near the bot-

tom with additional extra heavy pipe sections, known as collars, and the whole string was then held in partial suspension while it revolved, the course of the bit was much easier to control and it was possible to drill a straight hole. On the other hand, when the full weight of the string was allowed to exert itself on the formation without tension, then is when the bit really "went for a walk." Meantime, having found a way of telling with certainty when the bit had begun to drift off its perpendicular course, the next necessity was to perfect a technique for getting it back on again. That, too, came along in good time, first with the invention of whipstocks, knuckle joints and other devices that could divert the wandering drill; and, second, with the discovery of improved methods of orienting the equipment in the hole.

Whipstocks and Knuckle Joints

The whipstock is a metal guide (shaped like the stock of a buggy whip, hence its name) through which the bit is threaded and forced by an inclined surface back of its proper path. The knuckle joint as the name suggests is a flexible knuckle or knee joint, placed just above the bit. It imparts a slight bend or curve to the bottom of the string and if one really knows how, can also correct the misdemeanors of a wayward bit. Orienting the down-hole equipment simply means knowing the position of any part of it with respect to the compass points. (It comes from **oriens,** which is a part of a Latin verb that means "to rise." Hence the Orient is the land of the rising sun —the east—and to orient tools, technically, is to know which part faces the east. Knowing that, natch, you know which parts face all the other parts of the compass.

Directional Drilling

With his usual perversity, no sooner had the operator learned how to straighten out the crooked holes than he began to realize that if he could make crooked holes deliberately and control the direction of their crookedness, he would have a tool that would enable him to reach many hitherto unreachable oil reservoirs. He already had the means available and it wasn't long until controlled directional drilling became common practice in the industry. It brought within the grasp of the operator billions of barrels of off-shore oil. It made possible in one instance the tapping of a rich formation underlying a cemetery, without a word of dissent from the local folk, by the simple expedient of starting the hole some distance away, boring straight down for 500 feet or so and then whipstocking over to the subterranean treasure. It enabled the operators to recover oil in sizable quantities from beneath residential areas without disturbing the residents other than to send them scampering to the bank at regular intervals to deposit their royalty checks. It made available also all sorts of rich finds in strangely concealed underground traps which had formerly been unapproachable. To put it mildly, the drilling of a crooked hole had definitely been elevated from an accident to an art!

Record Set by Tidewater Refinery

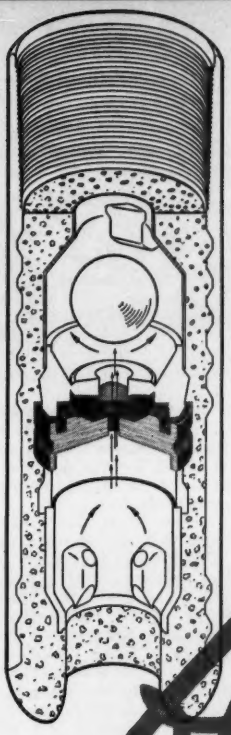
A new world's record for continuous operation of a fluid coking unit set at Tidewater Oil Company's Avon Refinery near San Francisco was announced by Oscar Larson, manufacturing manager for the company's western division. First coker to be designed for 42,000 barrels a day of heavy stock similar to asphalt, the Avon Refinery unit on January 20th exceeded the previous record of 300 continuous days of operation set by its sister unit at the Tidewater Delaware Refinery. As of the morning of January 28th, the coker at Avon had operated continuously for 309 days without interruption in its daily schedule.

Chief function of the 250-foot high coker at the west coast refinery is to upgrade refinery fuel oil into the more valuable components of gasoline and intermediate petroleum oils. The by-product, from which the unit gets its name, is a granulated coke that is industrially and commercially useful as an economical and efficient fuel.

The Avon unit and its twin at the Delaware Refinery are the two largest fluid cokers in operation in the world.

NEW UNIT TO TEST COLLAPSE OF CASING AT J & L WORKS

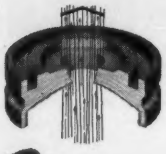
A test sample of oil country casing is being inserted in one of the pressure vessels of the new collapse testing unit recently put into operation at Jones & Laughlin Steel Corporation's Aliquippa, Pa., Works. The unit is capable of exerting 25,000 pounds per square inch of pressure which is believed to be a greater test pressure capability than for any similar unit. Rubber seals are placed on both ends of the casing sample, and the sample is inserted in the pressure vessel. A threated closure (at left) is then rotated into place to seal the chamber. The entire operation is remotely controlled and the operator looks through window (top right) of steel enclosure when test is in progress.



HERE'S HOW the FLEXIFLOW Variable Valve automatically fills casing from the bottom...

A When casing is lowered, pressure from below causes the hole in the reinforced synthetic rubber disc to open wider, and fluid enters the casing, thus preventing build-up of pressure surges.

B As the rate of lowering the casing is slowed down (to set the joint in the slips) pressure from below decreases; the hole in the Variable Valve diaphragm contracts; fluid volume entering the casing is reduced and overfill is avoided.



ECONOMICAL

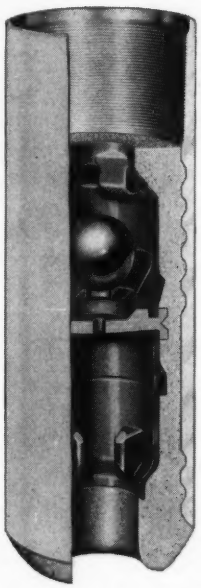
flexiflow

AUTOMATIC FILL-UP MEANS

NO SURFACE FILLING

CASING ON BOTTOM SAFER AND FASTER

PROTECTION OF PRODUCTIVITY



When pressure builds up as casing is lowered in the well, the Variable Valve in Baker FLEXIFLOW Shoes and Collars automatically opens wider and prevents pressure surges by permitting a large volume of fluid to enter the casing. As the rate of lowering is slowed down, pressure from below is lessened and the Variable Valve contracts to restrict fluid entry and prevent overfill. This automatic opening and closing action balances the *rate of fill* with the *rate of lowering* and prevents build-up of dangerous pressure surges.

Casing running time can be greatly reduced because Baker FLEXIFLOW Shoes and Collars save the time otherwise wasted in surface filling; and automatic "fill" permits the casing to be run faster without danger of damaging the formation by high-pressure surges. A back-pressure valve, for floating or cementing, is actuated by pressuring the casing.

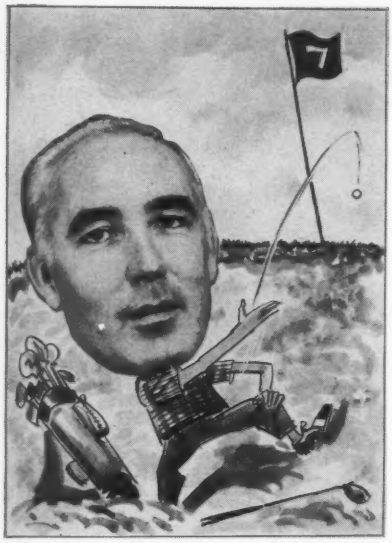
Ask any Baker representative how FLEXIFLOW Shoes and Collars (Regular or Circulating Type), used in combination with Baker CASING CENTRALIZERS and Baker WALL SCRATCHERS, bring you the safety and savings of Baker "Protective" Cementing.

BAKER OIL TOOLS, INC.
HOUSTON • LOS ANGELES • NEW YORK

For MORE than a good cement job, use Baker *FLEXIFLOW* Shoes and Collars in combination with Baker Casing Centralizers and Baker Wall Scratchers. *Available through your supply store.*

BAKER FLEXIFLOW
SHOES AND COLLARS

Personalities IN THE NEWS



OVER THE POLE

R. C. "Bob" Sawyer, manager of commercial sales for Scandinavian Airlines System, is a tall, amiable, capable looking chap, with the easy manner of an experienced contact man. During the past several years he has had an elegant opportunity to become widely acquainted among the oil people of Southern California who, if not the greatest, are among the greatest air travelers in the world. Bob is a native Houstonian but since he came to California at the early age of three, has lost most of the lingual characteristics that usually identify the Texan. He attended high school in San Diego, served in the United States Navy for three years during the second world war, and then decided to live in Honolulu. While there he was a student of the University of Hawaii, but finally became homesick, returned to California, and was graduated from UCLA in 1952 with a degree in public relations.

During his college days he was initiated into the Kappa Alpha fraternity, played on the varsity football squad as end under the coaching of the late Red Sanders, and was quite a whiz at handball. After graduation he began his working career with Douglas Aircraft, specializing in the design of radio and electronic equipment particularly for the DC-6's and DC-7's, for some 2½ years. Thence he migrated to American Airlines where he was given an intensive course in sales training. In 1954 he was offered and accepted a post with SAS as manager of commercial sales and until the present time has been rounding up the air-minded business men of the West Coast for the popular trip over the polar route, an assignment with which he is completely happy.

In recent years, Bob has developed two hobbies, skin diving which is a remnant of his old Hawaii days, and golf, which just sort of crept up and engulfed him. He is a member of the World Trade Association, and the World Trade Committee of the Los Angeles Chamber of Commerce, was sent back to Tulsa, Oklahoma, recently, to set up a transportation system in behalf of the Nomads for flying in visitors from foreign lands to the International Oil Show which takes place in May of this year.

He lives in Beverly Hills, has two children, a boy, Robert Thomas who attends Beverly Hills high school, and a girl, Lanell, who hopes to do the same in another ten years or so. Because of his attachment to SAS, Bob has done so much consulting in the past four years with the denizens of the derrick groves that he even talks like one.

With Standard in Honolulu

Robert H. Rowland of San Francisco has been named manager of the Hawaiian refinery of Standard Oil Company of California, Western Operations, Inc., now under construction near Honolulu. The plant is scheduled to begin initial operations in late 1960.

A native of Oklahoma, Rowland graduated from the University of Michigan in 1938 and joined the engineering staff at Standard's Richmond, California, refinery the same year. In 1947 he was appointed superintendent of the Perth Amboy, New Jersey, refinery of California Oil Company, a Standard operating company, and was named manager there in 1950. He returned to Standard's home office at San Francisco in March of 1958.

Ground was broken for the new refinery October 24 by Western Operations Board Chairman **E. J. McClanahan** on a 300 acre site at Barber's Point, 22 miles west of Honolulu. Land is presently being cleared and the contractors, Bechtel-Hawaiian Dredge, have announced that first movements of steel and other equipment to the site have begun.

Homco Appoints Western Representative

Homco announces the promotion of **J. W. (Mutt) Caskey, Jr.** from Division Sales Manager to Western Sales Representative. He will specialize in the sale of oil field tubular goods, compressor units, drilling equipment and Homco manufactured products.

His activity will cover the western half of the United States with the exception of the Gulf Coast. Caskey has been with Homco for eighteen years, the last six of which have been in the mountain states area.

FLUID PACKED PUMP CO. DIVISION MANAGERS MEETING

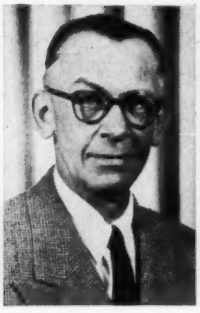
Fluid Packed Pump Company recently held a sales conference at the home office Los Nietos, California to acquaint their Division Managers with newly developed products and processes and finalize planning for 1959. Executive Vice-President Sidney Shuman, General Sales Manager Don Vandehberg and Chief Engineer John Brennan had charge of the conference.

Photo shows Division Managers from left in the back: H. H. Palmour, Hydraulic Division; J. T. Clements, Northwest Division; C. D. Newbolt, Gulf Coast Division. Front row: L. W. Crow, Eastern Division; G. R. Newbolt, Midwest Division. Not shown in the picture are: G. W. Peters, Southwest Division; R. V. Holton, Canadian Division; J. A. St. John, Technical Service Division.

M. L. McAlister

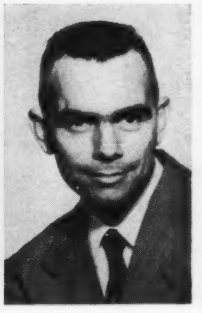
Dean Walling

O. A. Hicks



A. J. Olson

P. M. Davis



C. W. Gwaltney

H. C. Smith Appoints V.P.

Appointment of **Manuel L. McAlister** as vice president-manufacturing of the H. C. Smith Oil Tool Co., has been announced by **Donald E. Graham,** executive vice president. McAlister has been associated with the company for the past 23 years, joining the firm in 1936 when it was formed. For the past four years, he has been manager of manufacturing operations.

Western Geophysical Has New President

Henry Salvatori has announced the election of **Dean Walling** as president of Western Geophysical Company. Salvatori has stepped from the presidency into the newly created post of chairman of the board of directors.

Walling was executive vice president and general manager before his promotion. He started as party chief in California on the first crew organized by Western. He was quickly promoted to supervisor in California and in 1936 was transferred to Dallas where he became general supervisor of the Mid-Continent, Rocky Mountain and Gulf Coast operations. In 1938 he returned to Los Angeles as vice president and, subsequently, was named executive vice president and general manager.

Baroid Transfers Hicks

Baroid Division National Lead Company has announced the transfer of **O. A. Hicks,** formerly Superintendent of Baroid's drilling mud district at Oklahoma City, to Long Beach, California, as assistant area manager of the Pacific Coast area.

At the same time, it was announced, **Hubert Sanchez,** formerly Baroid's store manager at Long Beach, has been made superintendent of the Southern California district with headquarters at Long Beach.

Continental-Emsco Promotions

Continental-Emsco Company has announced the recent promotions of **A. J. Olson** to the position of chief application engineer-Houston; **P. M. Davis** to sales engineer-drilling structure-masts; and **C. W. Gwaltney** as senior design engineer.

Olson, formerly chief engineer-sales distribution division, joined C-E in 1927. He is a graduate of Iowa State College. He will headquarter in Houston at the Continental-Emsco plant.

Davis joined Continental-Emsco in 1953 and previously held the position of mast sales specialist. He will work out of the Dallas general offices of the oil field supplier and manufacturer.

Gwaltney will headquarter at C-E's newly expanded Houston manufacturing plant.

U.S. Industries Moves Advertising Office

In an effort to streamline operations and cut down travel time to divisions, the Los Angeles regional advertising department of U. S. Industries, Inc., has moved to 7701 Telegraph Road, Montebello, California, according to an announcement by William O. Merritt, regional advertising manager.

West Coast divisions of U. S. Industries, Inc., for which the regional office carries on all advertising and sales promotion functions, are Axelson of Vernon, pioneer manufacturer of oil pumping equipment; Southern Pipe of Azusa, manufacturer and processor of welded steel pipe; and Western Design of Santa Barbara and Montebello, designers and producers of electronic, electrical, electromechanical, fluid and hydraulic systems and equipment for air, ground, and sea application.

Boylhart, Lovett & Dean, Los Angeles industrial advertising agency, which has served the department since November of 1957, will continue with account executives, Robert E. Lovett handling Axelson and Southern Pipe, and James Dean serving both divisions of Western Design.

H. V. Jacobsen, who has been assistant manager of the Los Angeles department, has been shifted to the Axelson Division where he will concentrate on sales promotion and field sales training activities for Axelson exclusively.

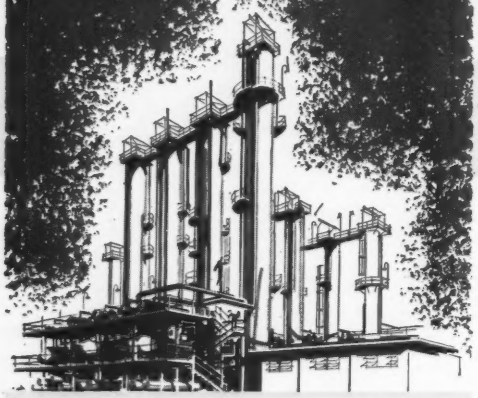
Standard Quitclaims Part of Offshore Lease

Standard Oil Company of California recently filed with the California State Lands Commission a quitclaim on 740 acres of its 960-acre offshore State Lease P.R.C. 735.1 at Montalvo. The Company will retain 220 acres.

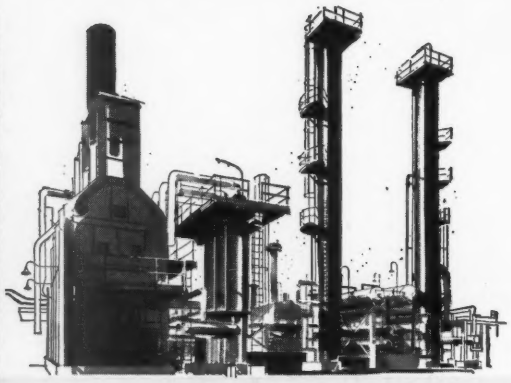
Standard acquired the lease by competitive sliding scale royalty bid in June of 1952 and has drilled a total of 13 wells, of which two were dry or noncommercial. All wells have been slant drilled from onshore drill sites.

Because of the slant drilling, the sliding scale royalties and the heavy viscous crude oil encountered, operating costs have been extremely high and development has been carried to its economic limit, the Company said.

Now any refiner can process any crude he wants...



UDEX® the ideal process for separation of super-purity aromatics



PLATFORMING® produces high octane gasolines, high purity aromatics

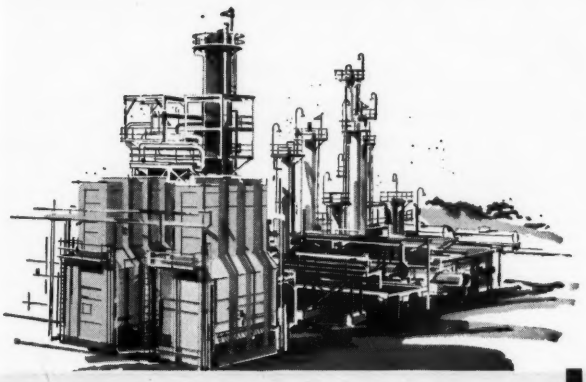
HF ALKYLATION makes alkylate, top anti-rumble motor fuel

other

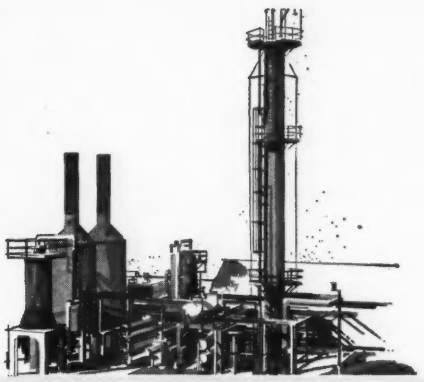
Never before could the petroleum refiner accomplish what he can today. Regardless of the sources and nature of his crude supply—or the kind of petroleum or petrochemical products he wishes to produce—Universal can furnish invaluable aid in helping achieve his objectives.

From its nineteen different processes currently available, Universal is in an unparalleled position to provide you with technical knowhow. From analysis of product and market potentials and evaluation of crude supplies through to process design, engineering, operator training and field and laboratory service, UOP is equipped and ready to work with you every step of the way.

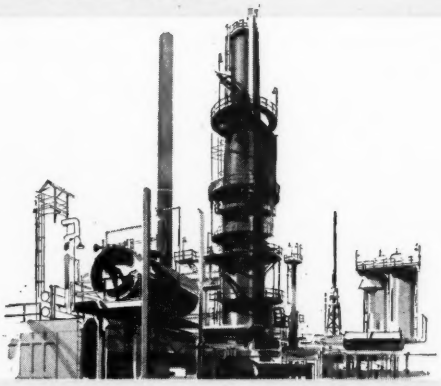
Write for information. Consultation is invited on any processing problem.



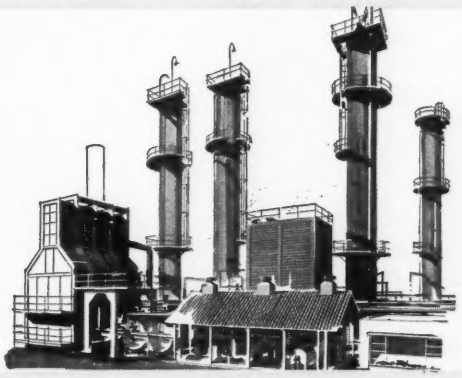
BUTAMER* a new and practical process for producing isobutane



UNIFINING* a modern process that completely purifies petroleum distillates



FLUID CATALYTIC CRACKING an improved process that gives higher yields, higher octane numbers



PENEX* new process converting light, normal paraffins to isoparaffins

processes available from UOP

REXFORMING®
the ideal process to insure your top octane position

UNISOL®
a safe and economical process for low-cost gasoline finishing

VACUUM DISTILLATION and VISBREAKING
simple, easy to operate processes for preparation of feed stocks for catalytic cracking

L.P. COKING
permits adjustment of gasoline-to-heavy oils production ratio to meet market needs

THERMAL CRACKING
two-coil selective process, handles wide range of charging stocks

CATALYTIC CONDENSATION
converts olefin fractions of refinery gas into high-quality gasoline and petrochemicals

OLEFIN EXTRACTION
efficiently separates olefins and diolefins from paraffins. Also prepares olefins for further conversion

CATALYTIC DEHYDROGENATION
removes hydrogen from hydrocarbons to produce less saturated hydrocarbons

HYDRAR*
converts benzene to cyclohexane with excellent yields. Extreme high purity achieved with Udex grade benzene

AROSORB
removes heavier aromatics from synthetic and natural distillates, produces aromatic-free heavier distillates

ALKAR*
produces ethylbenzene, cumene and other alkylated aromatics from Fluid Catalytic Cracker off-gas streams

SULFURIC ACID ALKYLATION
produces alkylate, blending component for high-octane gasoline

*TRADEMARKS

UOP® UNIVERSAL OIL PRODUCTS COMPANY
30 ALGONQUIN ROAD, DES PLAINES, ILLINOIS, U.S.A.
More Than Forty Years Of Leadership In Petroleum Refining Technology

CENTER OF ATTRACTION

Vital statistics on the young lady were not furnished, but the hoop skirt she's wearing has a whopping 95-inch waist. Manufactured by B and W, Inc., these centralizers range in API casing size from 2⅜" to 30", are available from warehouse stocks throughout all oil-producing areas. Not always so fashionably displayed, they are nevertheless the latest fashion for centering oil well casing.

A.P.I. Catalogue

The 1959 catalogue of publications and materials produced by the American Petroleum Institute is now available through API's New York headquarters.

It contains thumbnail descriptions of each publication, code numbers and costs, specific instructions for ordering the various items.

Copies of the 60-page catalogue may be obtained gratis through the Publications Department of API at 50 West 50th Street, New York 20, New York.

Wire Rope Opens Warehouse

The Wire Rope Corporation of America, Inc. has announced the opening of a new warehouse in Los Angeles, California on February 9, 1959.

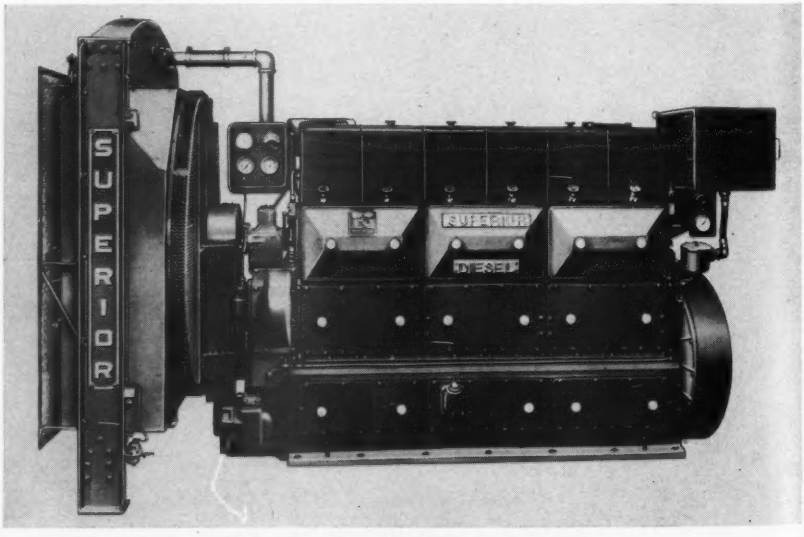
In charge of the new warehouse is Norman Shabaz, district sales manager for the Wire Rope Corporation of America. The warehouse, located at 1018 S. Santa Fe Avenue in Los Angeles, phone MAdison 7-6356, will service all of Southern California including the trade areas of Las Vegas, Nevada, Prescott, Phoenix and Tucson, Arizona.

Diesel Drilling Engine

A new drilling engine model added to White's Superior "PTD" series of drilling diesels has been announced by W. F. Burrows, Vice President and General Manager, White Diesel Engine Division, The White Motor Company. Designated the PTDS-6M, the engine incorporates a space-saving turbocharger arrangement that requires only 120" along the base including space for radiator.

The engine is rated 450 HP continuous, 500 HP intermittent, and 550 HP maximum for drilling service. It embodies these proven design features: Fuel saving open chamber combustion system; rigid camshaft; counterweighted statically and dynamically balanced crankshaft; rigid box-type base fully supporting crankshaft; cylinder block simplifying servicing; iron alloy pistons; forged steel connecting rods; individual, two-valve cylinder heads; positively rotated, special alloy valves; and full pressure lubricating system.

A new Bulletin No. 118 that fully describes all the engineering achievements of the Superior Diesel drilling engines may be obtained through supply stores of leading rig manufacturers, through White's oil field representatives, or through the White Diesel Engine Division, Springfield, Ohio.



White Superior PTDS-6M Drilling Diesel

Meet the man who started us in business just one hundred years ago

He's Edwin L. Drake—who drilled the world's first commercial oil well in Titusville, Penn.—August 27, 1859

Your business and mine started when Edwin L. Drake decided to drill rather than dig for oil in Titusville—one century ago. From that first oil well to the modern service station is a long stride in time, and a much longer stride in progress and achievement.

This progress is still sweeping forward. It will keep going as long as oil people are free to try out new ideas. Our freedom means continuing benefits for our customers. It means continuing opportunities for those of us who make our living in the oil business.

Oil's one hundredth anniversary offers the best chance ever to tell our neighbors what the oil business means to them. Folks will then have increased respect for their service station dealer, and for the contributions we make to their comfort, convenience and safety. It's one of many stories oil people will be reporting in this Centennial year—a story every service station dealer can be proud to join in telling.

1859 1959

OIL'S FIRST CENTURY
-BORN IN FREEDOM
WORKING FOR PROGRESS

COMMITTEE ON PUBLIC AFFAIRS OF THE AMERICAN PETROLEUM INSTITUTE • 50 WEST 50th STREET • NEW YORK 20, NEW YORK

America makes SAS *One of the "Big 3" to Europe*

NEAR EAST • AFRICA • ASIA

Though there are a dozen airlines to Europe, passengers by actual count make SAS one of the "Big 3" to the Continent. And only SAS flies the direct polar route from California to Europe . . . to all the Near East and Africa.

Magnificent DC-7C Global Express

Fly the fastest, quietest of all airliners, over the polar short-cut from Los Angeles to Europe, Luxurious first class service offers regal meals, champagne, spacious berths to make your trip a handful of splendid hours. Tourist class has exclusive SAS Comfort-Line seating which gives you more room to read, dine, sleep. Global Express flights direct from New York to all Europe, too.

For Travel or Cargo Reservations—See your Agent or SAS . . . 8929 Wilshire Blvd., Beverly Hills, Calif.

Enjoy SAS Luxury from California to

ABADAN • CAIRO
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FIRST OVER THE POLE

SAS
SCANDINAVIAN AIRLINES SYSTEM

West Coast Offices: Los Angeles • San Diego • San Francisco • Seattle • Vancouver

Mammoth Bit and Reamers

Air is not the commodity oil men ordinarily prefer to find at the bottom of a hole. But in this business, anything can happen. Thus, when Terminal Drilling Company pushed a 46″ Grant bit 1432 feet into desert floor without striking oil or gas or too much water, the client, Phillips Petroleum Co., was well pleased.

In this case, the hole had to be a duster because it was to be a ventilation shaft to serve one of Phillips' uranium mines in the Ambrosia Lake Mining District near Grants, New Mexico. This 1432 footer and its 930-foot smaller brother, serving another Phillips mine, also may be used as emergency escape hatches.

According to Bob Woodruff, Terminal's manager of field operations, the Grant 46″ bit, followed by two Grant 46″ reamers, did a remarkably good job of straightening and reaming the hole so that casing could be run without difficulty.

Since all the mud had to come out of the shaft before the miners opened their end, Terminal made and installed special centralizers on the tubing while swabbing the hole clean. Drilling also required construction of special spider, slips, and casing clamps, Woodruff said.

To enable the drillers to unscrew the mammoth bit and reamers from the drill stem, a mud-tight door was installed in the riser of the 48″ conductor pipe. When the bit was pulled, a special box was inserted through the door and the bit was then lowered to rest on this box while the drillers worked on it.

The shaft was drilled in stages: 15″ pilot hole, 26″, 36″ and 46″. Two 7½″x14″ pumps maintained circulation through the bit, drill pipe was 5 9/16″. Three 8″ x 40-foot drill collars were employed. Casing was 36″ diameter, with wall tapered from ⅝″ at the top to 1″ at the bottom.

Using extra large Grant bits and wall scraper, Terminal previously had drilled 36″ bell holes in the Wilmington field to protect oil wells from earthquake damage. The company also drilled 500-foot, 36″ holes in the Nevada testing ground for the Atomic Energy Commission. Numerous water wells have been completed with the same equipment.

This 46″ Grant bit and two of the 46″ reamers were used to complete two ventilation shafts to Uranium mines in New Mexico. Grant's chief engineer, Clarence Leathers, is standing between the bit and one reamer.

AUSTRALIA BOUND

Halliburton Oil Well Cementing Co. Twin T-10 cementing unit is loaded at the Houston docks for shipment to South Australia. Halliburton will operate for Delhi Australian Petroleum Limited north of Adelaide, capital of South Australia, and provide cementing, fracturing and formation testing services. Halliburton is the Welex, Inc. agent for Australia and will also provide wire line and perforating services.

Field Development

Pacific Coast and "4" Corners

LOS ANGELES BASIN

San Juan Capistrano Test Abandoned

Roy Gill-Operator's Krum No. 1 located in the southeast quarter of Section 7-8s-7w has been abandoned at a total depth of 7117 feet. The test was a joint venture with the Universal Consolidated Oil Company.

Beverly Hills Wells Abandoned

Hudson Gas & Oil Company has abandoned the three test wells drilled on the Los Angeles Country Club property. Although the surface location for all three wells was near the southeast corner of Section 23-1s-15w, the tests were directionally drilled to the north and west. Well No. 1 was drilled to 9367 feet, Well No. 2 to 8121 feet, and Well No. 3 to 5515 feet.

Standard Abandons Castaic Test

Standard Oil Company's N. L. & F. 13 Well No. 1 in Section 28-4n-16w was abandoned at a total depth of 11,971 feet and a redrilled depth of 10,130 feet. The test was located three miles west of the Placerita field.

Saugus Test for Union

Union Oil Company is grading location for N. L. & F. No. B-4 located in the northwest quarter of Section 15-4n-16w, approximately 1000 feet north of their nearest producer.

South Rosecrans Activity

G. R. Nance completed Bucher No. 1 as a new fault block discovery flowing at 240 b/d of 40 gravity oil cutting three per cent through a 14/64" bean with 500/1100 psi. The well was shut in awaiting completion of a gas line. Located in Section 20-3s-13w approximately 1000 feet east of the south-end of the field, the well reached a total depth of 7800 feet and was plugged back to 7670 feet. 7" casing with perforations from 6550-7670 feet is landed on the plug and cemented through perforations at 6550 feet.

Atlantic Oil Company's Kishima No. 1 in Section 20-3s-13w, approximately 900 feet northwest of the G. R. Nance completion, drilled to 7149 feet and cemented 7" casing at 6246 feet. A perforated liner is being run preparatory to completion.

Atlantic Oil Company is drilling below 2500 feet on its second test in the area, Cannon No. 1 in Section 20-3s-13w, approximately 700 feet northeast of its Kishima No. 1.

SAN JOAQUIN VALLEY

Windgap Well Completing

Reserve Oil and Gas Company is preparing to complete R-S-T No. 88-30 in Section 30-11n-19w. Located in the Windgap area of Wheeler Ridge, the well was drilled to a total depth of 8872 feet and has 7" casing cemented at 8726 feet. Before cementing 7" casing, the well, on an open hole test from 8728-8872 feet, flowed at a 2150 b/d rate through a 12/64" bean with 2400 psi flow pressure.

Belgian Anticline Test for Shell

Shell Oil Company is grading location for Shell-Amerada-AML No. 88X-8, a 4000 foot test in the southeast corner of section 8-30s-21e.

Buena Vista Completion

Honolulu Oil Corp.'s Calidon No. 12 in Section 19-31s-23e, on an open hole test flowed at a 936 b/d rate. The well was killed and after running the perforated liner, completed flowing 348 b/d of 28 gravity cutting 4 per cent. Flow was through a ¼" bean with pressures of 400/75 psi and 96 mcf of gas. Total depth of the well is 5874 feet with a bottom hole plug at 5771 feet, and 7" casing is cemented at 5613 feet.

Trico Gas Completion

Trico Oil and Gas Company completed Bryson No. 2 in Section 28-24s-23e flowing 2800 mcf of gas through a 42/64" bean with pressures of 550/610 psi. The well was drilled to 2561 feet and has 5½" casing cemented at 2560 feet with perforations from 2489-2479 feet and 2472-2461 feet.

Helm Well Flows

Amazon Supply Company completed Amazon-Rheem-Capital No. 37X-15 flowing 130 b/d of 37 gravity oil cutting 0.5 per cent water. Located in the southwest quarter of Section 15-17s-18e, the well was drilled to a depth of 7025 feet and cemented 5½" casing at 7023 feet. The 5½" casing is gun perforated from 6853-6838 feet and 6827-6817 feet.

Paloma Completion For Superior

The Superior Oil Co. completed KCL No. 43-11 in Section 11-32s-26e flowing 258 b/d of 56 gravity oil cutting 0.6 per cent through a 16/64" bean. The well reached a depth of 10,412 feet and was plugged back to 10,043 feet, with 7" cemented there.

Pleito Ranch Outpost Test

Shell Oil Company has graded location for KCL No. 88-23 located near the southeast corner of Section 23-11n-21w, which is approximately 4000 feet northwest of the Pleito Oil Field.

Strand Completion For Universal

Universal Consolidated Oil Co. completed Statex-KCL No. 88-7 in the Upper Stevens Zone flowing 176 b/d of 33 gravity oil, cutting 0.1 per cent through an 11/64" bean with pressures of 585/890 psi. Drilled to a total depth of 9832 feet, a test of the Lower Stevens recovered water. The hole was plugged to 8550 feet and 7" casing perforated from 8158-73 feet and 8471-77 feet.

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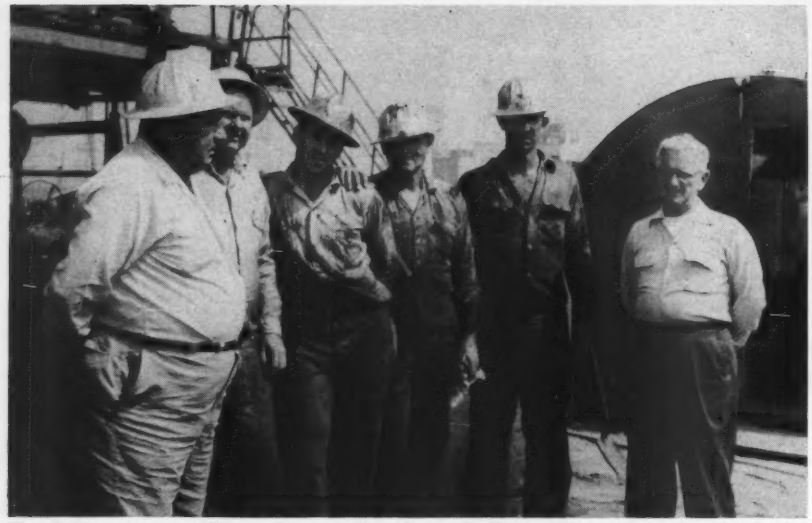

The drilling crew on Signal Oil and Gas Co. well, Harbor No. 1, Long Beach: Fowler Drilling Co., contractor. Left to right, Earl D. Ballard, tool pusher for Fowler; Bert Odgers, driller; Charlie Landcaster, derrickman; P. F. Lauerty, cathead; P. E. Baily, piperacker; "Whity" Henderson, pusher for Signal Oil and Gas Co.

Gosford Completion for Union

Union Oil Company has completed Union-Universal-Statex-Frazier No. 45-24 from the Upper Stevens Zone, flowing 250 b/d with a 36 per cent cut. Located in Section 24-30s-26e, the well was drilled to a total depth of 10,262 feet and cemented 7" casing at 10,199 feet. Tests on the lower portion of the hole was negative and the well is producing from the perforated interval 8214-21 feet.

Reserve New Pool Discovery

Reserve Oil & Gas Company's W-T No. 319 in Section 19-11n-19w, completed as a dual completion, is a new pool discovery in the Z-6 Zone, flowing 317 b/d of 31 gravity oil cutting one per cent from the perforated interval 11,715-11,384 feet. Flow from the Upper Zone, perforated at intervals from 9790 feet to 9378 feet, was 610 b/d of 35.7 gravity oil with a one per cent cut. Total depth of the well is 11,717 feet with 7" casing cemented at 11,384 feet.

Reserve Oil & Gas Co. is preparing to drill R-S-T No. 187-19 located in the southeast quarter of Section 19-11n-19w. The well will be an Olcese Sand test and is a joint venture with Sunray Mid-Continent Oil Co. and the Tejon Ranch Company.

Rosedale Branch Abandonment

Atlantic Oil Company has abandoned KCL No. 1 in Section 6-29s-27e at the comparatively shallow depth of 4770 feet. The test was located ½ mile east of the Rosedale Ranch field.

Bakersfield Test Abandoned

Union Oil Company abandoned Oak-street No. A-2 at a total depth of 7616 feet. Although the surface location of the test was near the east-quarter corner of Section 26-29s-27e, the hole was directionally drilled easterly beneath the residential section of Bakersfield. The well was Union's second try in the area.

Garrison City Test Abandoned

Golden Bear Oil Co., Operator, has abandoned Garrison City Unit-Moore-Clark No. 1 in Section 5-28s-24e after drilling and coring to a total depth of 6000 feet. The test was located approximately one mile northwest of the company's gas discovery located in Section 9-28s-24e.

Wheeler Ridge Completion

In the Windgap area, Richfield Oil Corp. completed ROCO-MJM&M-Banks No. 36-30 in Section 30-11n-19w flowing at a 932 b/d rate on a 2-hour gauge and was shut in. The oil is 33 gravity cutting 2 percent mud & water. Total depth of the well is 8719 feet with 7" casing cemented at 8516 feet. The interval open to production is from 8516-8719 feet.

White Wolf Wildcat Test

Shell Oil Company has staked location for KCL 52-5, a 9000 foot test in the northeast-quarter of Section 5-10n-21w. This location falls approximately 1600 feet southwest of its KCL No. 68-32 new field discovery, now pump testing.

Edison Test for Atlantic

Atlantic Oil Co. is preparing to spud MJM&M-Jeppi No. 8, a Schist test located in the northwest quarter of Section 17-30s-29e.

Rosedale Outpost Test

Humble Oil & Refining Co. is grading location for KCL No. G-2 located in the southwest quarter of Section 14-29s-26e. The test will attempt to extend the producing limits approximately 1200 feet to the north.

COASTAL AREA

Saticoy Test for Superior

The Superior Oil Company is grading location for Lloyd-Butler No. 1 near the center of Section 6-2n-21w. This wildcat test falls approximately one mile southeast of the Saticoy Field productive limits.

Oxnard Completion For Standard

Standard Oil Company of Calif. completed Security First National Bank No. 1 flowing 350 b/d of 31 gravity oil cutting 5 percent through a 12/64" choke and 229 mcf of gas. The well, an extension test of the field, is located in Section 11-1n-22w and was drilled to 9520 feet and 7" casing cemented at 8339 feet. Cement was cleaned out to 8339 feet and the casing perforated at intervals from 7070-8315 feet.

Texaco Nipomo Point Test

The Texas Company has abandoned its Bolton No. 1 in the northwest quarter of projected Section 31-11n-34w in San Luis Obispo County, at 1555 feet. The test was approximately six miles northwest of the town of Santa Maria.

El Rio Test Abandoned

Western Gulf Oil Company has abandoned Richfield-Smith No. 1, an extension test in Section 27-2n-22w, at a total depth of 10760 feet.

South Mountain Completion

Cabeen Exploration Company completed its first try in the area. Hunter-Terry No. 1 in Section 30-3n-20w was good for 180 b/d of 18 gravity oil cutting two percent. Total depth of the well is 7826 feet with 5½" casing cemented at 7738 feet.

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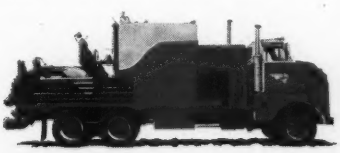

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Offshore Test Abandoned

Standard Oil Company of Calif. has abandoned its offshore exploratory well, Standard-Refugio State No. 1, near Refugio Beach and approximately twenty miles west of Santa Barbara. Located on projected Section 11-4n-31w on a 3500-acre State lease, the well was drilled to a total depth of 6673 feet. The company is now reviewing results of the test before planning further development.

Hollister Ranch Test

Aeco Corporation has acquired a lease on 1254 acres from the Hollister Ranch Company and has staked location for a 5000-foot test on the NW¼ of Section 35-5n-33w. Because the location is approximately one-half mile from the offshore Texas-Monterey-Newmont lease which brought the top tidelands cash bonus of $23,711,000, the venture will be watched with considerable interest.

Deep Test for Shiells Canyon

The Texas Company is grading location for Shiells No. 20, a 14,000 foot test in the west quarter of Section 5-3n-19w.

NORTHERN CALIFORNIA

Glenn County Gas Test

In the Willows Gas area, W. S. Payne, Jr. & Associates of Long Beach are preparing location for D'Egelbert No. 1 near the east quarter of Section 15-19n-2w, on the westerly flank of the Willows Gas Field.

Vernalis Gas Field Development

Porter Sesnon et al and Great Basins Petroleum Co. have completed and shut-in three more gas wells in the field. Mohawk-Basolo-Hunter No. 62-21 in Section 21-3s-6e was completed at a depth of 4465 feet. Sesnon-Vernalis Unit 2 No. 27-15 in Section 15-3s-6e drilled and completed at a total depth of 4274 feet, and Unit One No. 65-22 in Section 22-3s-6e was completed at a depth of 4195 feet.

Beehive Bend Well to Redrill

R. W. McBurney is rigging rotary for a redrill job on Section 29 Unit No. 2 in Section 29-20n-2w. The well was originally drilled to 5929 feet and abandoned. After a recheck of the electric logs, it was decided to redrill the hole from 3300 feet to about 5700 feet. B. J. & M. Drilling Co. has the drilling contract.

Glenn County Abandonment

Klaner and Doolin of Scottsdale, Arizona drilled St. Louis No. 1, a gas test in Section 5-19n-1w, and abandoned the well at a depth of 3615 feet. The test was located in the Llano Seco area approximately 2000 feet west of Humble Oil & Refining Company's production.

Beehive Bend Extension Completion

McCulloch Oil Exploration Company completed McCulloch-WWH Unit No. 1 in Section 14-19n-2w as a dual completion, flowing 5000 mcf of gas from the Upper Zone and 5000 mcf of gas from the Lower Zone. The well was drilled to 7360 feet and cemented 5½" casing at 4905 feet. The Upper Zone has 81 feet perforated within the interval 4089-3983 feet and the Lower Zone has 38 feet perforated within the interval 4703-4657 feet. McCulloch has graded locations for two more tests in the area.

Signal and Bankline To Merge

Directors of Signal Oil and Gas Company and Bankline Oil Company have unanimously voted to merge the two firms on the basis of one share of Signal for five and one-half shares of Bankline. The joint announcement was made recently by Samuel B. Mosher, chairman of the board, and Russell H. Green, president, of Signal; and L. L. Aubert, president, and S. A. Patterson, vice president and general manager, of Bankline. Signal Oil and Gas Company is to be the surviving corporation after stockholders of both companies have ratified the merger, the details of which are being worked out.

The merging of the two integrated independent oil companies is calculated to strengthen further Signal's position as the leading independent oil company in the West, the announcement stated. Signal's operations will be expanded by the addition of Bankline's reserves, marketing outlets, and 10,000-barrel refinery at Bakersfield, California. Bankline crude oil production is approximately 1,500 barrels per day.

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FOUR CORNERS AREA

San Juan County—Utah

Shell Oil Company has staked location for two wildcats and both will test the Paradox. Shadscale No. 2 will be drilled in the northeast quarter of Section 26-41s-25e, and Shell-Sunray-Navajo No. 63-1 will be drilled in the Southeast quarter of Section 30-42s-23e.

Skelly Oil Company is grading drill site for Church Rock Unit No. 1 located in the northwest quarter of Section 26-31s-23e. The wildcat will be a 9500-foot Mississippian test.

San Juan County—New Mexico

Utah-Southern Oil Company's Government-Newman No. 1 located in Section 27-27n-13w was completed as a new discovery, pumping 190 b/d rate from the Upper Gallup. Drilled to 5340 feet, 5½" casing is cemented on bottom and gun perforated from 5276-5262 and 5248-5242 feet.

Pan American Petroleum has reached total depth on McAdams No. B-1 in Section 28-27n-10w and is swabbing wash oil. Drilled to 6602 feet, the test has 7" casing cemented at 6601 feet and perforated in the Gallup from 5738-5704 feet.

OTHER STATES

Cape Fairweather Area—Alaska

Colorado Oil and Gas Corp. and Frankfort Oil Company are fishing for a cementing tool on Yakutat No. 3 in Section 3-28s-34e. The test was drilled to a total depth of 10,848 feet and a redrilled depth of 10,351 feet. The 7" casing is cemented at 10,351 feet.

Iniskin Bay Area—Alaska

Alaska Consolidated Oil Company has spudded Well No. 1 in Section 18-5s-23w and is drilling below 3000 feet. Robin Willis is the engineer and geologist for the project.

Kenai Peninsula Area—Alaska

Halbouty Alaska Oil Company's Halasko-King Oil Co. No. 1 in Section 6-7n-9w is ready to drill ahead after cementing 13⅜" casing on bottom at 2930 feet. The test is slated to be drilled to 12,000 feet.

Standard Oil Company of Calif. and Richfield Oil Corp. are drilling below 9500 feet on Swanson River Unit No. 4 in Section 16-8n-9w. The operators will drill Swanson River Unit No. 5 in Section 10-8n-9w and Swanson River Unit No. 6 in Section 27-8n-9w.

Widebay-Kanatak Area—On the Alaska Peninsula

Humble Oil and Refining Co.'s Bear Creek Unit No. 1 in Section 36-29s-41w is making hole ahead below 14,200 feet. A 7⅝" protection string is cemented at 10,935 feet.

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Says an insurance actuary, "Most of the accidents in the home occur in the kitchen." And someone must eat them—food being as expensive as it is.

Drive-in theater: Where a guy goes to shut off his ignition so he can try out his clutch.

Overheard on a bus: "You must have been up pretty late last night, Mrs. Harper. I saw your light on at 3 a.m."

"Oh, I was just removing some spots from my husband's pants."

"At that hour? Were they very big?"

"Not very—just two ten-spots and a five."

A farmer's barn had burned down and the agent from the insurance company arrived to discuss the claim. Explaining the policy that covered the structure, he told the farmer that his firm would build another barn of similar size instead of paying the claim in cash. The farmer was furious.

"If that's the way your company does business," he exploded, "you can just cancel the insurance policy on my wife!"

Mama—"I'm so glad to see you sitting so quiet while your father naps."

Junior—"I'm watching his cigarette burn down to his fingers."

It's a sure sign of old age when the gleam in your eye is from the sun hitting your bifocals.

Two harried men were discussing their joys and sorrows.

"My wife," said one, "is very poetic. She gets up at sunrise and says 'Lo, the morn!'"

"Huh!" said the other, sadly. "Mine says 'Mow the lawn!'"

Bride: "Darling, will you still love me if I grow fat?"

Groom: "Heck, no — I promised for better or for worse, not through thick and thin."

"I shouldn't be offering you wine, should I? You are the head of the Temperance League, aren't you?" remarked the hostess to a male guest.

"Oh, no, I'm the head of the Anti-Vice League."

"Well, I knew there was something I shouldn't offer you."

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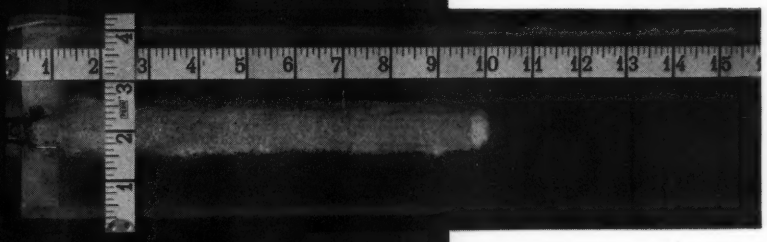

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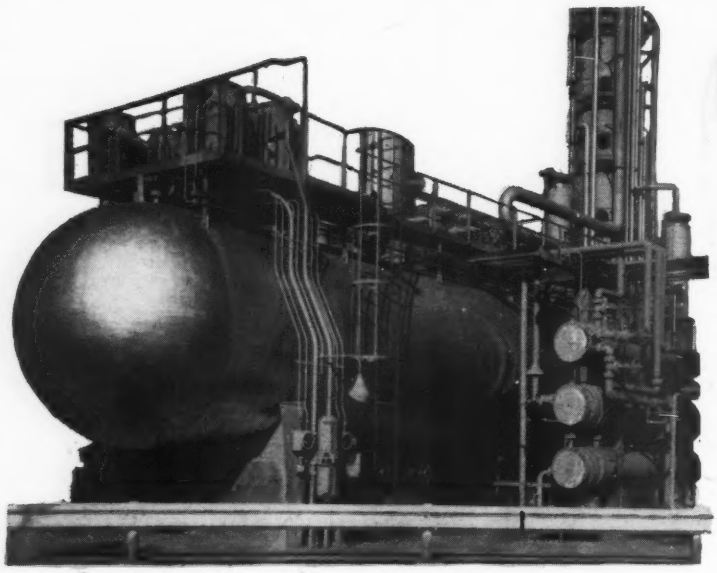

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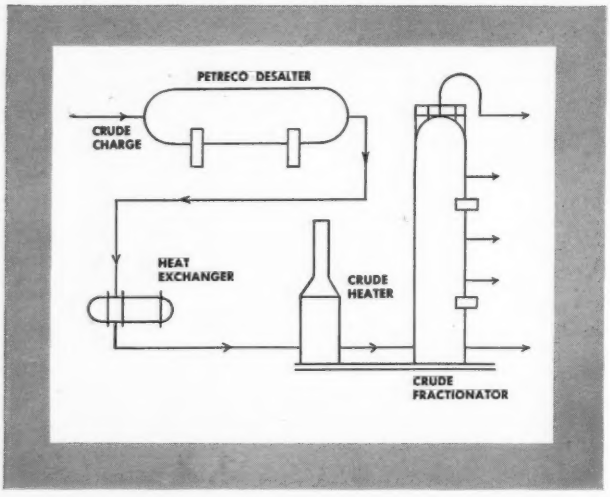

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